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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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3624

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 09/828,900 | Applicant(s) OZONO ET AL. | |
| | Examiner Charles Kyle | Art Unit 3624 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to Claims 1-10 and 12, Applicant has added substantial language to the claims; the new language is confusing. Particularly in the second phrase of Claim 1, beginning “a storage device for storing a plurality of data sets...”, the Claims recite “values”, “factors”, “attributes” and “conditions”. The relationship among these elements is unclear and it is certainly not clear how these elements relate to the presentation of data sets on axes of a coordinate system. The Claim language suggests a mathematical computation utilizing these elements, but is so confusing as to obscure any clear meaning. Applicant may intend that evaluation values are plotted on a multi-dimensional coordinate system, but this is not clear because an “attribute” has a position on an axis, per the claim language. This would suggest the plotting of an attribute, say “blue” or “sad” on a mathematical coordinate system, which makes no sense. The Examiner has examined the Claims to the best of his ability, given the condition of the Claims. For purposes of evaluation, the assumption is made that some type of values are somehow computed and plotted from independent evaluation values on a multi-dimensional coordinate system. The language suggests “variable fixing” of the variable values is performed, as argued by Applicant’s in Remarks.

If Applicant's invention, as supported by the originally filed disclosure, supports particular elements or steps to somehow present "data sets of evaluation values" on a multi-dimensional display, the Claims should be amended to clearly describe the way in which this is done.

Claims 1-10 also recite "axis" where the plural "axes" should be presented. The phrase "a plurality of axis", as in Claim 1 is incorrect. The Claims also lack articles preceding nouns; see below in Response to Arguments, instances identified by "[sic]".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,263,955 *Summers* in view of US 6,330,645 *Suh*.

The *Summers* reference discloses a business position display system for illustrating a business environment position of a business unit to be analyzed, comprising:

A storage device for storing a plurality of data sets of evaluation values for every business unit to be analyzed, each data set containing evaluation values representing the results of a business unit evaluation as to a plurality of evaluation factors, said sets of evaluation values further having different values on a first evaluation factor axis and having the same values on all other axes (col. 2, lines 21-41 and col. 19, lines 3-13; Col. 36, lines 60-67; Fig. 11),

An extracting processor extracting at least one set of evaluation values related to said business unit to be analyzed out of said storage device in accordance with a predetermined extracting condition as to the attribute (col. 2, lines 21-41; col. 37, lines 1-13; Fig. 23),

A coordinate calculating processor calculating coordinates in a multi-dimensional space in accordance with the set of evaluation values extracted by the extracting processor (col. 2, lines 21-41 and col. 1, line 52 to Col. 12, line 8; Figs. 3, 4), and

A display processor showing an object at a position corresponding to the coordinates calculated by said coordinate calculating processor in said multi-dimensional space on a screen (col. 2, lines 21-41 and Figs. 4, 6 and 7; Fig. 1, ele. 103) (Claims 1 and 12).

Summers does not specifically disclose that in the business unit analysis each set of evaluation values has a plurality of values on a plurality of evaluation factor axes. *Suh* disclose this limitation at Fig. 12, Current Year/Prior Year values, Fig 13 and Col. 8, lines 12-48, at least. It would have been obvious to one of ordinary skill in the art at the time of the invention to include the plurality of evaluation factor axes having plural values of *Suh* in the business analysis invention of *Summers* because this would provide comparability among various business units at different times. The addition of multidimensional data such as that of *Suh* would add additional breadth and accuracy to any analyses done by *Summers*.

The storage device stores the evaluation values in a multi-dimensional database in which a multi-dimensional space is logically defined by the evaluation factor axes respectively representing reference, said set of evaluation values being position in the multi-dimensional

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space in accordance with logical position of its attribute on each axis (col. 10, lines 2-5 and Figs. 4, 6 & 7), and

Said extracting processor extracts a set of evaluation values of which logical position of the attribute on each evaluation factor axis corresponds to the extracting condition (col. 11, line 19 through col. 12, line 67) (Claim 2);

A condition setting device for arbitrarily setting said extracting condition (col. 11, line 19 through col. 12, line 67) (Claim 3);

At least one of the axes logically defining the multi-dimensional space in said multi-dimensional database includes a plurality of elements concerning its corresponding references which have relationship of a relationship of a layered structure with one another (col. 11, line 19 through col. 12, line 67) (Claim 4);

The coordinate calculating processor calculates, when said extracting processor extracts sets of evaluation values related to a plurality of business units, a plurality of the coordinates for respective business units in accordance with each extracted set of evaluation values (col. 11, line 19 through col. 12, line 67), and

The display processor shows, when a plurality of coordinates are calculated by the coordinate calculating processor, a plurality of objects at positions respectively corresponding to the coordinates (col. 2, lines 40-41, col. 10, lines 2-5 and Figs. 4, 6 & 7) (Claim 5);

When a predetermined tallying condition is satisfied between a plurality of sets of evaluation values extracted by said extracting processor, said coordinate calculating processor tallies up the evaluation values belonging to the extracted sets of evaluation values satisfying said tallying condition to calculate a new set of evaluation values and thereafter calculates

coordinates in accordance with the new set of evaluation values (col. 11, line 19 through col. 12, line 67) (Claim 6);

The multi-dimensional space in which said object is shown by said display processor, is a two-dimensional space defined by a rectangular coordinate system (Figs. 6 & 7) (Claim 7);

The respective evaluation values are roughly classified into those related to environmental stability of industry, market strength, competitive advantage of a business unit to be analyzed, and financial strength of the business unit to be analyzed (col. 18, lines 19-67), and

Said coordinate calculating processor calculates coordinate on a first axis constituting the rectangular coordinate system in accordance with evaluation values of evaluation factors related to said market strength and said competitive advantage of the business unit to be analyzed, and coordinate on a second axis constituting said rectangular coordinate system in accordance with evaluation values of evaluation factors related to said environmental stability of the industry and said financial strength of the business unit to be analyzed (col. 11, line 19 through col. 12, line 67) (Claim 8);

The respective evaluation values are roughly classified into those related to a process viewpoint, an organization and personnel viewpoint, a stockholder viewpoint, and a customer viewpoint (col. 2, lines 52-67), and

Said coordinate calculating processor calculates coordinates on a first axis constituting said rectangular coordinate system in accordance with evaluation values of evaluation factors related to said process viewpoint and said organization and personnel viewpoint, and coordinate on a second axis constituting said rectangular coordinate system in accordance with evaluation

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values of evaluation factors related to the stockholder viewpoint and the customer viewpoint (col. 11, line 19 through col. 12, line 67) (Claim 9); and

In the multi-dimensional database, the respective evaluation factors are classified, according to evaluation factor axis representing reference about types of respective evaluation factors, into a first group comprising those related to environmental stability of industry, market strength, competitive advantage of the business unit to be analyzed and financial strength of the business unit to be analyzed, and a second group comprising those related to the process viewpoint, the organization and personnel viewpoint, the stockholder viewpoint and the customer viewpoint (col. 2, lines 52-67), and

Said extracting processor selectively extracts only evaluation values of evaluation factors belonging to either one of the first group or the second group in accordance with an extracting condition as to the evaluation factor axis (col. 2, lines 21-41) (Claim 10).

The *Summers* reference discloses a computer-readable manufacture for storing data of evaluation values respectively set to a plurality of evaluation factors for every business unit to be analyzed, the manufacture comprising:

A computer-readable medium (col. 1, lines 26-28), and

A data structure stored on the medium for displaying a business environmental position of a business unit to be analyzed, wherein the data structure, when implemented on a computer (col. 2, lines 21-41, permits the computer to:

Extract a set of evaluation values related to the business unit to be analyzed in accordance with a predetermined extracting condition of an attribute of a set of evaluation values, said set of

evaluation values further having different values on a first evaluation factor axis and having the same values on all other axes (col. 2, lines 21-41),

Calculate coordinates in a multi-dimensional space in accordance with the extracted set of evaluation values (col. 2, lines 21-41), and

Output image data showing an object at a position corresponding to said calculated coordinates in the multi-dimensional space on a screen (col. 2, lines 21-41) (Claim 11).

Response to Arguments

At pages 9-12 of Remarks, Applicant argues that *Summers* fails to teach, and indeed teaches away from independent “variable fixing” as suggested by the Claim phrasing “representing a factor of evaluation condition at a position indicating a concrete condition concerning the factor, some of the data sets having attributes defined at different position [sic] on one axis but positioned at [sic] same position on all other axis [sic].” Applicant argues that *Summers* teaches away from this concept because the intent of *Summers* is to “simultaneously consider several attributes” in order to find the “optimal product”, citing *Summers* at Col. 12, lines 12-13 and 38-40.

Applicant ignores the other portions previously cited which include Col. 12, lines 12-41, which specifically discloses the “variable fixing” argued by the Examiner and dismissed by Applicant as not taught by *Summers*. The full text reads:

In addition to its multiple optima, multi peaked value functions of the type used in the present invention possesses another property absent from smooth and some rugged value functions: an optimal product cannot be discovered by varying the attribute-characteristics independently. To illustrate this property, consider a product that has two attributes: a.sub.1 and a.sub.2, where each attribute expresses an integer between one and ten. Suppose that the product in the product space with the highest value has a.sub.1 = 3. ***In the prior art value functions, for any value of a.sub.2 three is the best choice for a.sub.1. Because of this, student's using prior art MTSs can find the best product by treating each attribute***

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independently (see the closing remarks). In the example above, once a student has discovered that three is the best value for attribute one, he need not consider attribute one again. He can focus exclusively on finding the best value for attribute two. However, when a multi-peaked value function is used, the best value for an attribute depends upon the characteristics expressed by other attributes. FIG. 5 demonstrates this quality.

FIG. 5 shows a value function for products that have two attributes, each expressing a characteristic from the set {A,B,C,D}. In FIG. 5, no two rows have their highest value in the same column. Likewise, no two columns have their highest value in the same row. FIGS. 6 and 7 illustrate this same quality for the value function depicted in FIG. 4. Each figure depicts a 'slice' that shows how the value function varies with $x_{sub.1}$ for a different particular value of $x_{sub.2}$. As can be seen, the best value for $x_{sub.1}$ in FIG. 6 is not the best value for $x_{sub.1}$ in FIG. 7. Because of this quality of multi-peaked value functions, students cannot find the optimal product by considering each attribute independently. Instead, students must simultaneously consider several attributes, and this interaction of attributes has consequences described below.

Particularly note bolded and italicized text, which shows treatment of independent variables, one at a time.

At page 14 of Remarks, applicant argues against the motivation to combine as not specifically set out by the references. In response to this argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention *where there is some teaching, suggestion, or motivation to do so* found either in the references themselves or *in the knowledge generally available to one of ordinary skill in the art*. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner has specifically set forth a motivation to modify *Summers* by *Suh* based on what one of ordinary skill in the art would know to do; Applicant provides no substantive argument against this motivation and so it stands.

The rejections are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kyle whose telephone number is (571) 272-6746. The examiner can normally be reached on 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

crk
April 4, 2006

Primary Examiner
Charles Kyle
Art Unit 3624

A handwritten signature in cursive script, appearing to read "Charles Kyle", written in black ink.